IGCSE Assessment for learning: science skills checklist (graph version)

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| Name: | Date: |

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| Design | Aim of investigation or research question is unclear. | There is a research question but dependent and independent variable have not been clearly defined. | A research question that has the dependent and independent variable clearly defined. |
| Only one control variable has been identified. | Most important control variables have been identified. | All important control variables have been identified. |
| Little detail in method in terms of amounts/sizes or how control variables will be measured. | The method includes some amounts/sizes and some of the control variables are kept constant. | The method is a numbered list of detailed steps, with amounts/sizes that keep all control variables constant. |
| No clear instructions in method on how, when and how often the dependent variable will be measured or is only measured once. | Clear instructions but the independent variable is changed less than 4 times. | The independent variable is changed at least 4 times. |
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| Data collection and processing | Some data is collected, not all relevant, and is not recorded in a table. There is inconsistency in number of decimals in data. | Some relevant raw data is missing and/or table does not have any of the following: title, column headings with units, uncertainties. There is inconsistency in number of decimals in data. | All data collected is relevant and is recorded in an appropriate results table with title, column headings and units, uncertainties. There is consistency in number of decimal places in data. |
| Two or more of the following are missing on the graph: title, suitable scales, labels or units **and** some points are not plotted correctly. | One of the following is missing on the graph: title, suitable scales, labels or units **or** some points are not plotted correctly. | Graph has title, suitable scales, labels and units and all points are plotted correctly. |
| Graph line connects the data points or does not deal with anomalies. | Incorrect line of best fit is drawn but deals with anomalies. | Correct line of best fit. |
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| Conclusion and evaluation | No clear conclusion (unclear statement or no reference to data) or is not consistent with data collected or is very obvious. | Clear but obvious qualitative statement consistent with data. | A clear conclusion consistent with data and supported by the data. |
| Identifies some irrelevant experimental error(s). | Identifies at least one relevant experimental error, weakness or limitation. | Identifies at least two relevant experimental errors, weaknesses or limitations. |
| Suggests unrealistic improvement(s). | Suggests at least one appropriate improvement linked to the experimental errors. | Suggests at least two appropriate improvements linked to the experimental errors. |

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| D | 1 | 2 | 3 | 4 | 5 | 6 | 8 | 17 | 25 | 33 | 42 | 50 |
| 7 | 8 | 9 | 10 | 11 | 12 | 58 | 67 | 75 | 83 | 91 | 100 |

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| DCP | 1 | 2 | | 3 | | 4 | | 5 | 11 | 22 | | 33 | | 44 | | 56 |
| 6 | | 7 | | 8 | | 9 | | 67 | | 78 | | 89 | | 100 | |

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| CE | 1 | 2 | | 3 | | 4 | | 5 | 11 | 22 | | 33 | | 44 | | 56 |
| 6 | | 7 | | 8 | | 9 | | 67 | | 78 | | 89 | | 100 | |

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| Total | 1 | 2 | 3 | 4 | 5 | 6 | | 7 | 8 | 9 | 10 | 3 | 7 | 10 | 13 | | 17 | 20 | 23 | 27 | 30 | 33 |
| 11 | 12 | 13 | 14 | 15 | 16 | | 17 | 18 | 19 | 20 | 37 | 40 | 43 | 47 | | 50 | 53 | 57 | 60 | 63 | 67 |
| 21 | 22 | 23 | 24 | 25 | 26 | | 27 | 28 | 29 | 30 | 70 | 73 | 77 | 80 | | 83 | 87 | 90 | 93 | 97 | 100 |
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| My mark: | | | | | | | Peer mark: | | | | | | | | | Teacher mark: | | | | | | |